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Notice of Allowability	Application No.	Applicant(s)	
	10/811,932	YUE ET AL.	
	Examiner	Art Unit	
	Elias Desta	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 3/20/2006.
2. ☒ The allowed claim(s) is/are 1-34 and 39-55.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| <ol style="list-style-type: none">1. <input type="checkbox"/> Notice of References Cited (PTO-892)2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none">5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>05/17/2006</u>.7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance9. <input type="checkbox"/> Other _____. |
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Detailed Action

Response to Amendment

1. Applicant's arguments, see amendment, filed 3/20/2006, with respect to claims 1-34 and 39-55 have been fully considered and are persuasive. The rejection of claims 1-34 and 39-55 has been withdrawn. Examiner acknowledges the cancellation of claims 35-38 and accepts the amendment to Figs. 1-6.

Allowance

2. Claims 1-34 and 39-55 are allowed. The following is an examiner's statement of reasons for allowance:

In reference to claims 1, 18, 32 and 39: *Pasady* et al. (U.S. PAP 2005/0221514, hereon *Pasady*) teaches a method of controlling a process in a semiconductor manufacturing system (see *Pasady*, page 2, paragraph 14, lines 1-9). The method includes:

- Setting process control input data for the process in the semiconductor manufacturing system (see *Pasady*, page 3, paragraph 43, lines 6-15);

- Measuring process control output data from the process in the semiconductor manufacturing system (see Pasady, page 4, paragraph 45, lines 6-8);
- Determining a relationship between the process control output data and the process control input data because the system uses a closed-loop, run-to-run model where an input-output relationship is established (see Pasady, page 4, paragraph 44, lines 11-13); and
- Calculating new process control input data by minimizing the difference between the target process control output data and predicted process control output data is determined using the relationship applied to the new process control input data (see Pasady, page 4, paragraphs 49-51).

However, unlike Pasady, the claimed invention determines a functional relationship between the process control input data along the plurality of process control output data points, sets target process control output data to a target result of the process and calculate the new process output data based to the target result. The target result is produced based on the predicted process control output data associated with the plurality of process control output data points. A functional relationship is applied to the new process control input data, and then the new process control input data is revised by minimizing an

integrated difference between the target process control output data and the predicted process control output data in order to improve control of the process.

The remaining claims 2-17, 19-31, 33, 34, 40-55 are dependent upon claim 1, 18, 32 and 39 and contain further limitations.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Desta whose telephone number is (571)-272-2214. The examiner can normally be reached on M-Th (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public

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PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elias Desta
Examiner
Art Unit 2857

- e.d.

May 18, 2006


CAROL S.W. TSAI
PRIMARY EXAMINER